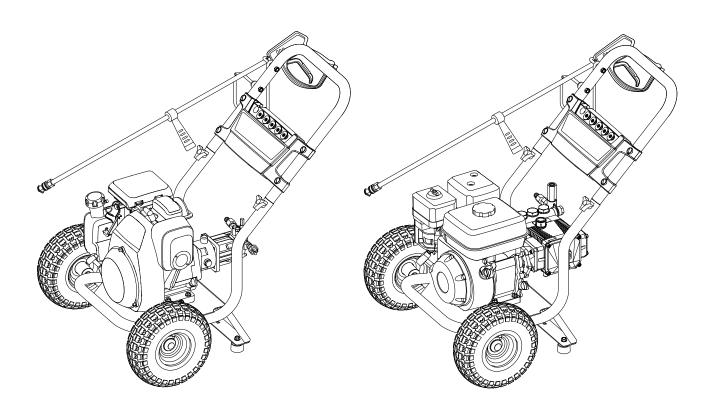
SERVICE MANUAL

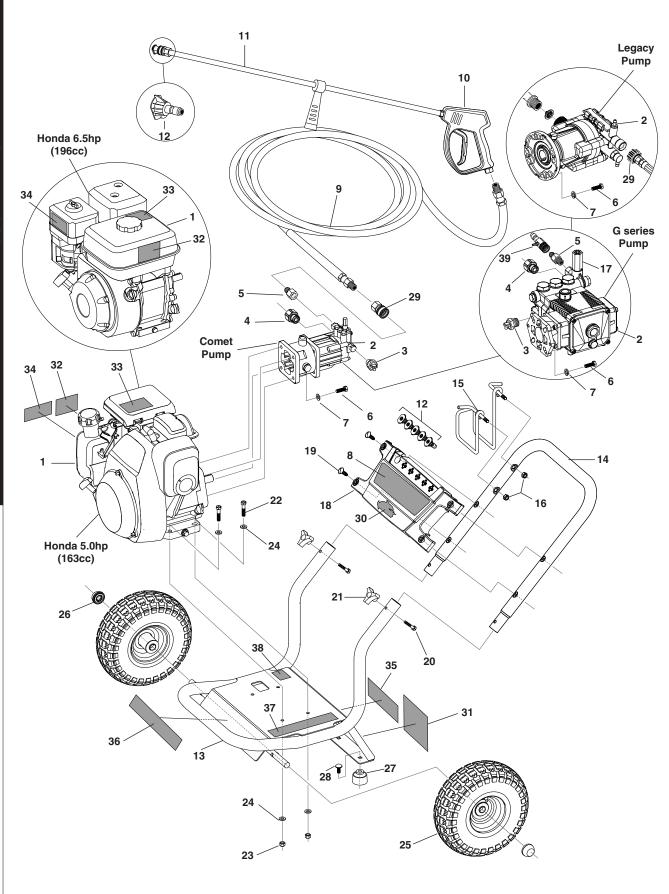


MODEL #	ORDER #
XPERT-HD 2.3/23 P / DD-232336	1.107-103.0
XPERT-HD 2.3/23 P / DD-232337	1.107-104.0
XPERT-HD 2.5/27 P / DD-252737	1.107-106.0
PD3-23326	1.107-091.0
PD3-23327	1.107-092.0
PD3-27324	1.107-094.0
DA-232336	1.107-097.0
DA-232337	1.107-098.0
DA-252739	1.107-100.0

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EXPLODED VIEW



EXPLODED VIEW PARTS LIST

IEM	PART NO.	DESCRIPTION	QT
1	9.194-015.0 9.802-317.0	Engine -Honda GC 160 QHA , 5.0 HP (163cc/5.0HP)-(Legacy & Comet Pump Models) Engine, Honda, GX200UTQX2, 6.5 HP (196cc/6.5HP Models)	1 1
2	(see page 7)	Comet Pump BXD Assy	1
	(see page 8)	Pump, Legacy Axial 2.6 GPM 3000PSI	1
		G.1 Series Pump, 2.5 @3000, 3400 RPM (196cc/6.5HP Models)	1
3	8.707-256.0	Pump protector,1/2" PTP, 140DEG,P/N 1005 (All Models Except Legacy Pump Models)	
4	9.802-146.0	Swivel, 1/2" MP X 3/4", GHF w/strainer (All Models Except Legacy Pump Models)	1
5	9.802-170.0 9.802-171.0	Nipple, 3/8" X 3/8", NPT ST Female (Comet Pump Models) Nipple, 3/8" X 3/8", NPT ST Male (196cc/6.5HP Models)	1 1
6	6.965-007.0	5/16"-24X1" GR 5 SHCS THRU Hardener ZC	4
7	9.802-813.0	Washer, 5/16", Lock, Split Ring	4
8	9.138-437.0	Karcher branding label (Xpert HD & DD Models)	1
	9.138-439.0 9.138-440.0	Landa branding label (PD Models) Hotsy branding label (DA Models)	1
9	8.739-133.0	Hose, 3/8" X 25' 1 Wire Tuff-Skin (5 HP PD Models)	1
	8.739-026.0	Hose, 3/8" X 50' 1 Wire Tuff-Skin (6.5 HP PD Models)	1
	8.739-106.0 8.739-011.0	Hose, 3/8" X 25' 1 Wire Tuff-Skin (5 HP DA Models) Hose, 3/8" X 50' 1 Wire Tuff-Skin (6.5 HP DA Models)	1
	8.739-1124.0	Hose, 3/8" X 25' 1 Wire Tuff-Skin (5 HP Xpert & DD Models)	1
	8.739-021.0	Hose, 3/8" X 50' 1 Wire Tuff-Skin (6.5 HP Xpert and DD Models)	1
10	8.750-247.0	Gun, M407	1
11	8.783-039.0	Wand, 30"	1
12	9.104-024.0	Quick connect nozzle Kit(030)	1
		Nozzle, 0003, Red	1
		Nozzle, 0015, Yellow Nozzle, 0025, Green	1
		Nozzle, 0040, White	1
		Nozzle, Black, Soaper	1
13	9.115-095.0	Frame O4-BLK Wrinkle	1
14	9.140-131.0	Handle BLK Wrinkle	1
15	9.142-014.0	Hanger RT side	1
16	9.802-778.0	Nut, 5/16" Whiz Loc Flange	2
17	(see page 12)	UU1, 3500PSI, Universal Unloader (196cc/6.5HP Models)	1
18	9.134-022.0	Name plate	1
19	9.196-049.0	Nylon Rivet	4
20	9.196-307.0	1/4"-20 x 1-1/2" GR 2, Hex Bolt Zinc	2
21	8.767-003.0	1/4"-20 Star Knob	2
22	9.802-713.0	Bolt, 5/16" X 1-1/2", NC HH(612975)	4
23	9.802-776.0	Nut, 5/16", ESNA, NC	4
24	8.718-980.0	Washer, 5/16"", Flat, SAE(780452)	8
25	9.189-007.0	Wheel 10" X 3.50" Pneu	
26	9.182-506.0	Cap Black Plastic, 5/8"Fastener	2
27	9.183-405.0	Rubber dampener	2
28	9.196-308.0	5/16"-18 X 1/2" Carriage Bolt, A307 BLK	2
29	9.802-166.0	Coupler, 3/8" Female, Brass	1
		O-Ring, Viton, 3/8" Coupler Twist Connect M22 Ev2/8" END (Logovy Rump Models)	1
	8.707-182.0 ▲8.704-036.0	Coupler, Twist Connect, M22-Fx3/8"" FNP (Legacy Pump Models) O-Ring, Viton, Twist Connect	1
30	9.138-438.0	Shark branding label (Xpert HD & DD Models)	1

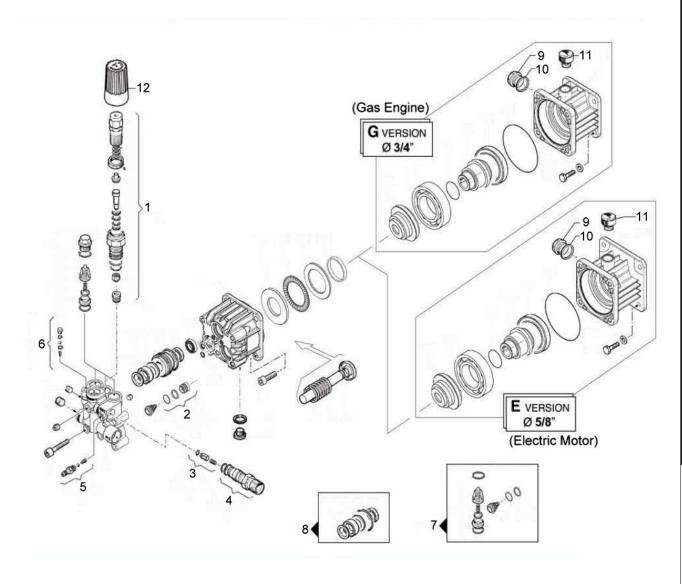
EXPLODED VIEW PARTS LIST (CONT)

ITEM	PART NO.	DESCRIPTION	QTY
31		Label, Intended for Outdoor Use - Serial - Specs	1
32	9.800-008.0	Label, Danger Cool Engine	1
33	9.800-006.0	Label, Hot/Caliente w/Arrows	1
34	8.917-015.0	Label Regulation 4442.6	1
35	8.783-034.0	Label, Quick Start Guide 1 (196cc/6.5HP Models)	1
	8.783-037.0	Label, Quick Start Guide 2 (163cc/5.0HP)-(Legacy & Comet Pump Moc	lels) 1
36	8.783-035.0	Label, Operator Warnings Trilingual	1
37	8.783-036.0	Label, Warning Pictogram	1
38	8.783-038.0	Label, Universal DB Rating, Ear Protection, Trilingual	1
39	9.802-215.0	Injector, Chem, Non Adj, 2-3 GPM, 0.070 (196cc/6.5HP Models)	1
40	6.388-216.0	▲ Hose DN 5	1
41	5.731-609.0	▲ Filter with weigh	1
42	9.802-958.0	▲ Shaft Key, 0.185 SQR X 1.75" (All Models Except Comet Pump Models)	1
		A Net Observe	

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COMET PUMP BXD, 5/8" SHAFT EXPLODED VIEW

8.920-017.0 COMET PUMP BXD



COMET PUMP BXD REPAIR KITS

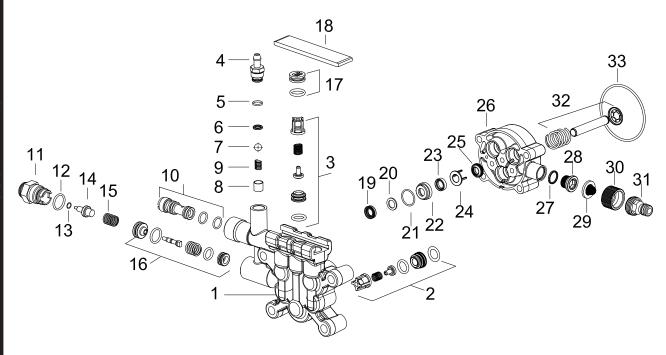
ITEM	PART NO.	DESCRIPTION	QTY
1	8.725-556.0	Kit, valve	1
2	8.725-557.0	Kit, suction valve	1
3	8.725-558.0	Kit, check valve	1
4	8.725-559.0	Kit, injector body	1
5	8.725-560.0	Kit, chemical coupling	1
6	8.725-561.0	Kit, easy start	1

	PART NO.	DESCRIPTION	QIY
7	8.725-562.0	Kit, complete valve kit	1
8	8.725-563.0	Kit, piston seal	1
9	8.725-564.0	Oil site glass	1
10	8.725-565.0	O´ring	1
11	8.725-566.0	Oil cap	1
12	8.725-567.0	Knob	1

DESCRIPTION

PUMP EXPLODED VIEW AND PARTS LIST

8.920-004.0

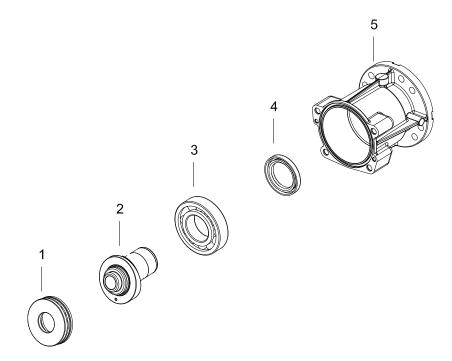


ITEM	PART #	DESCRIPTION	QTY
1	8.762-010.0	Cylinder Head	1
2	9.175-004.0	Valve Assy Horizontal	3
3	9.139-371.0	Spare Part List, Set 3	1
4	5.443-448.0	Nipple Chemestry	1
5	6.362-451.0	O-Ring Seal 8.0 x 1.0	1
6	6-362-175.0	O-Ring Seal, 5.28 x 1.78	1
7	7.401-909.0	Sphere 7 G40 - 1.4401	1
8	5.110-714.0	Sleeve	1
9	5.332-258.0	Helical Spring	1
10	9.139-372.0	Nozzle, INS 020/021 Pump	1
11	9.184-018.0	Outlet-Thermal Valve	1
12	6.362-480.0	O-Ring Seal, 12.42 x 1.78	1
13	7.362-507.0	O-Ring Seal 8 x 2 NBR 90	1
14	6.413-403.0	Thermo Valve Tin Coated	1

ITE	M PART#	DESCRIPTION	QTY
15	5.332-290.0	Helical Spring	1
16	9.175-005.0	Unloader Assembly	1
17	4.132-007.0	Drain Plug Replacement	1
18	5.003-062.0	Plate	1
19	9.177-301.0	Hich Pressure Seal	3
20	9.177-310.0	Back Ring	3
21	6.362-833.0	O-Ring Seal 12.5 x 1.73	3
22	9.155-011.0	Housing Low Pressure Seal	3
23	6.363-058.0	Grooved Ring	3
24	9.134-016.0	Spacer	3
25	6.365-393.0	Oil Sealing 12.20x4/6	3
26	9.133-007.0	Piston Guide	1
27	6.362-390.0	O-Ring Seal 15.6 x 1.8	1
28	9.134-019.0	Male Adapter	1
29	9.181-005.0	Filter Seal	1
30	9.155-013.0	Female House Conn	1
31	9.178-005.0	Adapter Garden	1
32	9.139-370.0	Spare Part List, Piston	1
33	6.362-471.0	O-Ring Seal 80.0x3.0 NBR70	1

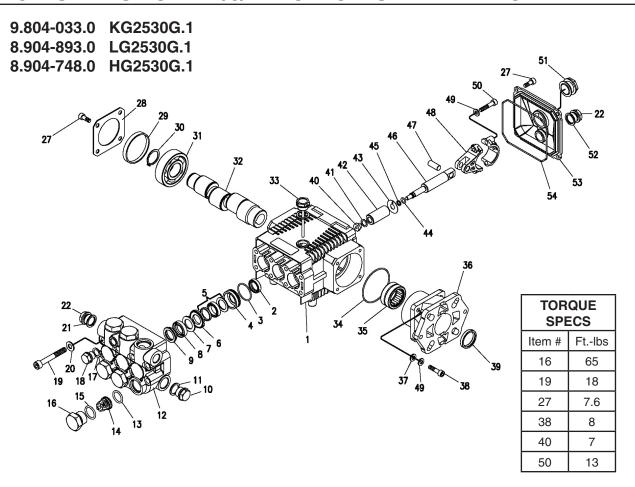
PUMP EXPLODED VIEW PARTS LIST (CONT)

8.920-004.0 Housing View



ITEM	PART #	DESCRIPTION	QTY
1	9.166-016.0	Grooved Ball Bearing	1
2	9.135-018.0	Swash Plate Hor.	1
3	9.165-356.0	Ball Bearing No 6207	1
4	9.177-314.0	Radial Seal 35 x 52 x 7	1
5	9.135-016.0	Oil Housing	

G.1 SERIES PUMP w/3/4" HOLLOW SHAFT EXPLODED VIEW



G.1 SERIES PUMP EXPLODED VIEW PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY
1	9.803-938.0	Crankcase	1
2*	See Kit Below	Plunger Oil Seal	3
3*	See Kit Below	O-Ring Ø1.78 x 28.30	3
4*	See Kit Below	Pressure Ring, 15mm	3
5*	See Kit Below	U-Seal, 15mm	3
6*	See Kit Below	Intermediate Ring 15mm	3
7*	See Kit Below	Backup Ring 15mm	3
8*	See Kit Below	U-Seal, 15mm	3
9*	See Kit Below	Support Ring, 15mm	3
10	9.802-926.0	Brass Plug, 1/2"	1
11	9.803-199.0	Copper Washer 1/2"	1
12	9.803-946.0	Manifold Housing	1
13*	9.803-947.0	O-Ring Ø1.78 x 15.54	6
14*	See Kit Below	Valve Assembly	6
15*	9.803-948.0	O-Ring Ø2.62 x 18.77	6
16	9.803-949.0	Valve Plug	6
17	9.803-950.0	Washer, Copper	1
18	9.803-951.0	Brass Plug G1/4	1

ITEM	PART NO.	DESCRIPTION	QTY
19	9.803-952.0	Manifold Stud Bolt	8
20	9.802-884.0	Washer	8
21	9.803-198.0	Copper Washer 3/8"	1
22	9.802-925.0	Brass Plug 3/8"	2
27	9.802-939.0	Hexagonal Screw	9
28	9.803-953.0	Bearing Cover	1
29	9.803-954.0	Seal Bearing	1
30	9.802-914.0	Snap Ring	1
31	9.803-955.0	Ball Bearing	1
32	8.717-069.0	Crankshaft (2530G)	1
33	9.803-957.0	Oil Dip Stick	1
34	9.804-581.0	O-Ring 3.53 x 55.56	1
35	9.804-582.0	Needle Roller Bearing	1
36	8.717-212.0	Engine Flange	1
37	9.803-210.0	Spring Washer	4
38	9.804-584.0	Flange Screw	4

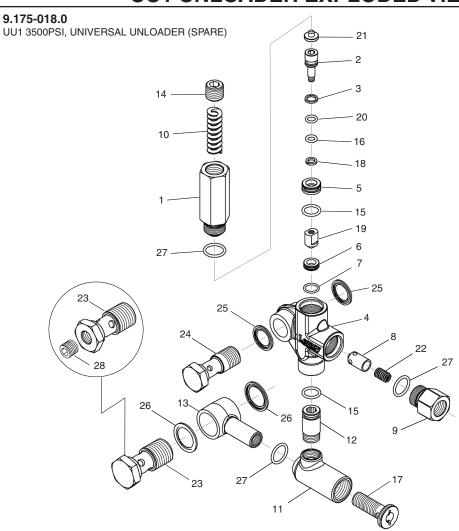
G.1 SERIES PUMP EXPLODED VIEW PARTS LIST (CONT)

ITEM	PART NO.	DESCRIPTION	QTY
39	9.804-585.0	Crankshaft Seal	1
40*	See Kit Below	Plunger Nut	3
41*	See Kit Below	Copper Spacer	3
42*	See Kit Below	Plunger, 15mm	3
43*	See Kit Below	Copper Spacer	3
44*	See Kit Below	O-Ring Ø1.78x5.28	3
45* Se	e Kit Below	Teflon Ring	3
46	9.803-964.0	Plunger Rod	3
47	9.803-965.0	Connecting Rod Pin	3
45	9.803-966.0	Connecting Rod	3
49	9.803-218.0	Spring Washer	6
50	8.933-020.0	Connecting Rod Screw	6
54	9.803-969.0	O-Ring 2.62 x 107.62	1
53	9.803-968.0	Crankcase Cover	1
52	9.803-197.0	Gasket, G3/4	1
51	9.803-202.0	Sightglass G3/4	1
* Part	available in kit	(See below)	

G.1 SERIES PUMP REPAIR KITS

REPAIR KIT NUMBER	8.725-354.0	8.725-355.0	9.803-934.0	9.803-936.0	9.803-937.0
KIT DE- SCRIPTION	Plunger Seal 15mm	Complete Seal Packing 15mm	Plunger 15mm	Complete Valve	Plunger Oil Seals
ITEM NUM- BERS INCLUDED	3, 5, 7, 8, 9	3, 4, 5, 6, 7, 8, 9	40, 41, 42, 43, 44, 45	13, 14, 15	2

UU1 UNLOADER EXPLODED VIEW



UU1 UNLOADER EXPLODED VIEW PARTS LIST

ITEM	PART #	DESCRIPTION	KIT	QTY
1	8.749-792.0	Piston housing		1
_2		Piston	С	1
_ 3		Piston O-ring back up	Α	1
4	8.749-796.0	Main block		1
5	9.152-372.0	Piston ring		1
6		Ball seat	С	1
7		O-ring 10.5 ID X 1.5 CS	A,C	1
8		Plunger	В	1
9	9.152-016.0	Plunger housing		1
10		Bypass spring	С	1
_11	9.149-001.0	Low pressure port		1
12	9.152-017.0	Sliding connector, 30mm		1
	8.762-005.0	Sliding connector, 40mm,	long	1
13	9.149-002.0	Sliding connector H 1/2"		1
	9.149-005.0	Sliding connector H 3/8"		1
14	9.196-011.0	Plug 5/8 -18 UNF		1
15		O-ring 12 ID x 2 CS	Α	2
_16		O-ring 6 ID X 2 CS	Α	1

ITEM	PART #	DESCRIPTION	KIT	QTY
17	9.149-006.0	Sliding connector guide		1
18		O-ring backup 6X 1.45X 1.68	Α	1
19		Conical seal	С	1
20		O-ring 6.75 X 1.78 BN80	Α	1
21		Spring seat	С	1
22		Plunger spring	В	1
23	8.762-001.0 8.762-011.0 8.762-000.0	Banjo bolt 1/2" Banjo bolt 1/2"-1/4"NPT Banjo bolt 3/8"		1 1 1
24	8.762-000.0	Banjo bolt 3/8"		1
25	9.802-893.0	Seal washer 3/8"		2
26		Seal washer 1/2" Seal washer 3/8"		2
27		O-RING 15 ID x 2CS	A,B	3
28	8.706-865.0	Plug, 1/4" countersunk		1
Kit A	9.104-038.0	O-ring Repair Kit		

Kit B 9.104-039.0 Outlet Kit

Kit C 9.104-040.0 Stem Repair Kit

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
LOW OPERATING PRESSURE	Insufficient water supply. Closed faucet. Inlet hose kinked	Use larger garden hose; clean inlet water screen. Open faucet.
	Clogged inlet hose strainer	Check plumbing system for leaks. Retape leaks with teflon tape.
	Faulty or mis-adjusted unloader valve	Adjust unloader for proper pressure. Install repair kit when needed. Call local distributor.
	Worn packing in pump	Call Dealer Customer Support.
	Machine has been stored in freezing temperatures	Thaw out machine completely, including hose, spray gun and wand.
	Slow engine RPM	Call local distributor.
FLUCTUATING	Worn or dirty pump valves	Call local distributor.
PRESSURE	Nozzle is obstructed	Blow out or remove debris with fine needle.
	Pump sucking air, inlet hose leaking	Check that all hoses and fittings are airtight. Turn off machine and trigger spray gun until a steady flow of water emerges through the nozzle.
	Insufficient water supply	Turn water on full force. Check garden hose for kinks, leaks or blockage.
PRESSURE LOW AFTER PERIOD OF	Nozzle worn	Replace nozzle.
NORMAL USE	Unloader valve worn	Replace unloader valve.
ENGINE WILL NOT	Low oil shutdown	Fill engine with oil.
START OR STOPS WHILE OPERATING	Out of gas	Fill fuel tank.
	Water in gasoline	Drain gas tank; fill with clean fuel.
ENGINE IS	Nozzle partially blocked	Clean nozzle.
OVERLOADED	Excessive pressure from high engine RPM	Adjust engine throttle to lower RPM.
WATER OR OIL LEAKING FROM BOTTOM OF PUMP	A small amount of leaking is normal	If excessive leaking occurs, Call local distributor.
PRESENCE OF	Water sprayed at machine	Change oil. Direct spray away from machine.
WATER IN PUMP OIL (BXD Comet & G	High humidity in air	Check and change oil twice as often.
Pump Series Only)	Piston packing worn. Oil seal worn.	Call local distributor.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
ENGINE OPERATES	Not enough gas or engine oil	Fill tank with gas. Check oil level.
FOR 15 MINUTES THEN STOPS	Vapor lock developed by heat of day	Keep gas tank full to avoid vapor locking.
I III CIOI C	Obstruction in fuel filter	Clean or replace fuel filter.
ENGINE LACKS POWER	Dirty air filter	Replace air filter.
ENGINE FALTERS	Choke is opened too soon	Move choke to halfway position until engine runs smoothly.
WATER DRIPPING	Piston packing worn	Call local distributor.
FROM UNDER PUMP	O-Ring plunger retainer worn	Call local distributor.
	Cracked piston	Call local distributor.
OIL DRIPPING	Oil seal worn or damaged	Call local distributor.
WATER LEAKING FROM PUMP	Spray gun closed with machine running 5 minutes or longer	Open spray gun or turn off machine.
PROTECTOR	Excess water supply pressure	Place a pressure regulator at end of 50' garden hose.
NO DETERGENT	Detergent suction tube not properly connected to machine	Check connection.
	Detergent is too thick	Dilute detergent. For best results, use manufacturers detergent.
	Detergent filter valve is at lowest setting	Set detergent filter valve to a higher setting.
	Filter on detergent suction tube is clogged	Run warm water through filter to remove debris.
	Damaged or clogged detergent suction tube	Remove obstruction or replace detergent suction tube.
	A high pressure nozzle is attached.	Replace with black detergent nozzle.
	Discharge nozzle is obstructed	Blow out or remove debris with fine needle.
GARDEN HOSE	Loose fittings	Tighten fittings.
CONNECTION LEAKS	Missing/worn rubber washer	Insert new washer.
SPRAY WAND LEAKS	Spray wand not properly attached	Slide the spray wand into the gun. Turn the wand collar clockwise onto the spray gun threads until tight.
	Broken o-ring	Call local distributor and order an o-ring.
PUMP IS NOISY	Pump is sucking air	Check that hoses and fittings are air tight. Turn off machine and purge pump by squeezing trigger gun until a steady flow of water emerges through nozzle.

PREVENTATIVE MAINTENANCE

This pressure washer was produced with the best available materials and quality craftsmanship. However, you as the owner have certain responsibilities for the correct care of the equipment. Attention to regular preventative maintenance procedures will assist in preserving the performance of your equipment. Contact your dealer for maintenance. Regular preventative maintenance will add many hours to the life of your pressure washer. Perform maintenance more often under severe conditions. Check pump oil and engine oil level before first use of your new pressure washer.

MAINTENANCE SCHEDULE			
	Inspect	Daily	
Engine Oil	Change	First month or 20 hours. Every 100 hours or every 6 months after first month	
	Filter	Every 50 hours	
Air Cleaner/Filter	Inspect	Every 50 hours	
Air Cleaner/Filler	Clean	Monthly	
Engine Fuel Filter		500 hours or 6 months	
Spark Plug Maintenance		300 hours or annually	
Clean Fuel Tank(s)		Annually	
Replace Fuel Lines		Annually	
Pump Oil	Inspect	Oil level daily	
(Comet and G Series pumps only)	Change	After first 50 hours, then every 500 hours or annually	
Replace High Pressure Nozzle		Every 6 months	
Replace Quick Connects/O-Rings		Annually/As needed	
Clean Water Screen/Filter		Weekly	
Replace HP Hose Annually (if there are any signs of wear)			

OIL CHANGE RECORD

Check pump oil and engine oil level before first use of your new pressure washer.

Date Oil Changed Month/Day/Year	Estimated Operating Hours Since Last Oil Change

Date Oil Changed Month/Day/Year	Estimated Operating Hours Since Last Oil Change